

AGU

Shoemaker Receives
the Bowie Medal

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The 1996 William Bowie Medal, given by AGU for outstanding contributions to fundamental geophysics and unselfish cooperation in research, was presented to Eugene Shoemaker at the AGU Fall Meeting Honor Ceremony on December 17, 1996, in San Francisco. The "Drs." in the title of the citation refers to both Eugene Shoemaker and his wife Carolyn Shoemaker.

Citation for Drs. * Shoemaker

"A Midsummer Night's Observing

*The poet's eye, in a fine frenzy rolling,
Doth glance from heaven to Earth,
from Earth to heaven*

*And, as imagination bodies forth
The forms of things unknown,
the observers lens*

*Turns them to shapes, and gives
to airy nothing*

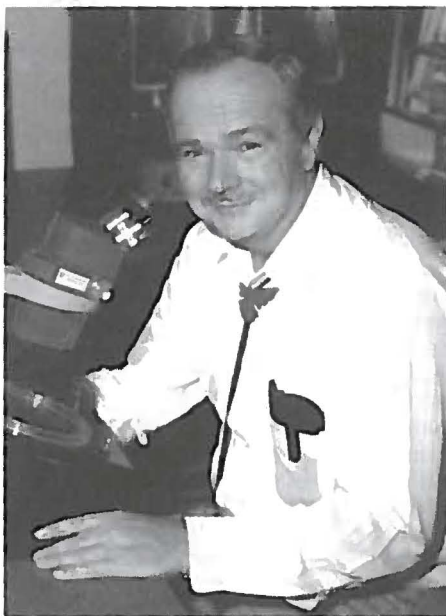
A local habitation and a name.

(Apologies to W. S.)

"Dr. Shoemaker is the leading comet discoverer of this century and has also discovered more than 800 asteroids. Dr. Shoemaker was the key figure in the discovery of Comet Shoemaker-Levy, the string of pearls comet, providing the opportunity to witness for the first time in recorded history the impacts of worlds with world, heavenly body with a planet, events that galvanized our planet. This discovery was the reward of long and painstaking hours of lonely research in the dead of night in unheated observatories. Dr. Shoemaker has many honors, including the Rittenhouse Medal, Cloos Scholar Scientists of the Year, Cosmos Club Lecture Award, and the NASA Exceptional Scientific Achievement Medal. Time does not permit more discussion of Carolyn's many accomplishments, so I now turn my attention to her husband, Gene.

"Gene Shoemaker has been described in dozens of citations for honorary degrees and awards, and there is really nothing more to say. More importantly, in receiving these awards, he has covered all possible ground so he should have nothing more to say. This part of the ceremony should therefore go very quickly.

"According to *Discover Magazine* (January 1995), Eugene Shoemaker is a retired planetary geologist and Carolyn is a former housewife.



"This is the kind of modesty one associates with this first family of the nighttime sky, but is perhaps too brief for even this sound byte occasion. I have read over past citations to Gene and they are, of course, full of superlatives and connecting verbs. There is no time to cover this ground again. Accordingly, I will split this citation into two parts: adjectives and adverbs and nouns. To save time, I have eliminated articles and verbs.

"Adjective and Adverbs

"Pioneering, innovative, frontier, first, major, systematic, outstanding, damn, persuasive "Supergene, far-reaching, wide-ranging, climatic, breathtaking, impressive.

"Nouns and Proper Nouns

"California, Colorado, Utah, Arizona, Survey, impacts, Chief, craters, Carolyn, coesite, Flagstaff, moon, Superchief, astrogeology, Palomar, asteroids, Pasadena, California Institute of Technology, Professor, Director, Chair, Leader, continents, worlds, solar systems, first life, last life, creation, obliteration.

"Doctorate, Medal, Doctorate, Academy, Medal, Award, Medal, Doctorate, Prize, Award, Medal, Medal, Award, Fellow, Award, Medal.

"Uranium to Uranian, Archean to tomorrow, thorium, plateau, Roche and Roach, Paradox, Carolyn, Coes, coesite, Copernicus, Ries, Chao, impact, Gault, Coconino, craters, Moon, Mare Cognitum, Luna, Gold and Green, Kuiper, Schmitt, Trask. Surveyor, Morris, Adams, Dwornik, Muhleman, Swann, Jaffe, Batson, Matson, Manson, Hait, regolith. Tranquility, Carolyn, Dahlem, Mule Ear, Squires, deep hole, Helin, Apollo, Carolyn, Comets, asteroids. Glo, volcano, Smith,

Soderblom, Masursky, Williams, Wolfe, extinctions, Ganymede.

"Voyager, Moenkopi, Io, Trojans, Ruth, Ganymede and Callisto, Mercurial to Jovial. Asteroids, Day, Johnson, evolution, Gilbert, Barringer, Leonard, Palomar, Schmidt, Rittenhouse, Uranian. "Venus, landslides, Powell, Whipple, Alvarez, Wilhelms, Trojans, Neptune.

"Arvidson, Europa, paleomagic, Clementine, Kieffer, Steiner, hazards, Toondina, Hassig, Roddy, Morrison. Carolyn, Levy, Hubble, July 16, crash, surge, pearl strings, spreading rings, a comet necklace now buried in the Jovial bosom.

"Gene Shoemaker has estimated that a comet of the size of Shoemaker-Levy 9, which I prefer to call Carolyn's necklace, impacts Jupiter once every 2000 years. This particular impact happened just after the comet was discovered, and the Hubble space telescope fixed, after the Galileo spacecraft got into position, when detector technology was right, and while the U.S. government was still investing in research. Although Gene calls this a miracle, I call it another impressive feat of persuasion by Super Gene.

"The last one, 2000 years ago, perhaps this time of year, perhaps on Christmas eve, probably was a miracle. For Carolyn and Gene, this one was business as usual."

* (Princeton, Arizona State, Temple, University of Arizona, Northern Arizona University)—Don L. Anderson, *California Institute of Technology, Pasadena, Calif.*

Response

"Thank you, Don. Now how do you respond to a citation like that?

"When I was a very young man, not even old enough to vote, I had just gone to work for the U.S. Geological Survey and had this sudden vision—me walking on the Moon figuring out the geology. I even figured out how I was going to get there. A committee sponsored by the National Academy of Sciences would select the scientists to go. Sixteen years later, the last part of this epiphany came true, and I chaired that danged committee. Not getting to the Moon and banging on it with my own hammer has been my biggest disappointment in life. But then, I probably wouldn't have gone to Palomar Observatory to take some 25,000 films of the night sky with Carolyn—she scanned them all—and we wouldn't have had the thrills of finding those funny things that go bump in the night.

"Can you imagine the feeling, after spending close to 40 years off and on poking around holes in the ground where things did go bump in the night, generally to the skeptical amusement of my geological colleagues, to participate in the discovery of an object that would soon hit a planet and then to witness the event? How lucky can you get? I'm glad it didn't happen when I was still very young. What would you do for an encore?